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09/601,790	09/05/2000	Angela Speith-Herfurth	6001-0106	2181

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EXAMINER

JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 02/27/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/601,790

Applicant(s)

SPEITH-HERFURTH ET AL.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A claim in which one ingredient is defined so broadly that it reads upon a second does not meet the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Ferm and Boynton*, 162 USPQ (BdPatApp & Int 1969.) Claim 1 (and 19) recite the limitation “a combination of (mixture) resin and wax” in line 3 (1-2) however, given that the claim nor the specification provide differentiating definitions of these terms, the Examiner takes the position that a wax is a resin and hence renders the claim indefinite. It is also noted that Claims 2, 4, 6, 11, 12, and 15 contain various limitations which lack sufficient antecedent basis in the claim, perhaps as a result of the preliminary amendment filed 9/5/00, ie. “the n-heptane...of the polypropylene of the base layer” (Claim 2), “the propylene polymer of the base layer” (Claim 4); “the hydrocarbon resin” (Claim 6); “the top layer(s)” (Claims 11, 12 and 15).
3. Claims 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Though alternative expressions are permissible in claim limitations, the claim limitation should be recited in the alternative only, for example, “a, b, or c”, or by proper Markush claim language, for example, “selected from the group consisting of a, b and c.” Claim 5 recites a list of resin materials which renders the claim indefinite because it utilizes both “or”

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and “and” terms making it unclear as to whether the film comprises one or a number of the resins listed.

4. Claims 11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by “such as” and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 11 recites the broad recitation “from 3 to 15”, and the claim also recites “from 6 to 10” which is the narrower statement of the range/limitation. Claim 13 recites the broad recitation “4 to 60 $\mu$ m”, and the claim also recites “from 5 to 30 $\mu$ m” and “from 6 to 25 $\mu$ m” which are the narrower statements of the range/limitation.

5. Claims 14-15 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 14-15 and 18, the phrase “preferably”

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renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

6. Claims 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 18 and 19 provides for “the use of a propylene film” and “the use of a mixture”, respectively, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 18-19 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 1-2, 4-7, 10-11 and 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Murschall et al (USPN 5,246,769.) Murschall et al teach a biaxially oriented polyolefin packaging film which is heat-sealable on both sides and has a base layer essentially comprising propylene polymer, preferably isotactic polypropylene having an n-heptane soluble content of 6% by weight or less, such as 4.5% as in the examples, which has been peroxidically degraded by a factor of about 3 to about 10; and two outer heat-sealable layers of ethylene-propylene copolymer which has also been peroxidically degraded by a factor of about 3 to 15; and wherein both the base and the two outer layers may contain appropriate additives in an effective amount including antistatic agents such as a tertiary aliphatic amine or polydialkylsiloxanes; antiblocking agents such as silicon dioxide; lubricants such as waxes or polydialkylsiloxanes in an effective amount of 0.1 to 2.5% by weight; neutralizers; stabilizers; and/or low-molecular weight resins such as hydrocarbon resins, styrene resins, or cyclopentadiene resins with a number average molecular weight of 200 to 1000 in a preferred amount of 3 to 15wt%; as well as others in amounts as listed in Col. 4 (meets the molecular weight limitations of both the "resin" and "wax", Abstract; Col. 2, lines 10-15; Col. 4, line 16-

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Col. 5, line 2; Col. 6, lines 24-30; Examples.) The thickness of the film may vary within broad limits and depends, in particular, on the intended use, with the overall thickness preferably from 10 to 50 $\mu$ m with the base layer comprising 50 to 90% of the film (Col. 5, lines 3-10.) Murschall et al teach that the film is preferably stretched from 4 to 7:1 in the longitudinal direction and from 8 to 10:1 in the transverse direction (Col. 5, lines 21-39.) Murschall et al teach that the polyolefin films have extremely low haze and very good gloss and hence are suitable as a cigarette packaging film (Col. 6, lines 3-9.)

11. Claims 1-7 and 10-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Peiffer et al (USPN 6,068,936.) Peiffer et al teach a biaxially oriented polyolefin film with a preferred embodiment comprising a core layer comprising isotactic polypropylene having a chain isotacticity of preferably 90 to 98% and a cycloolefin polymer additive (*equivalent to instantly claimed "wax"*) having a preferred Mw of 500 to 5,000 and a Mw/Mn from 1 to 5, preferably 1.5 to 4; and an outer heat sealable layer on one or both sides such as formed from polyolefin resin, and if desired, interlayers on one or both sides; wherein the isotactic polypropylene has a molecular weight distribution Mw/Mn of from 2 to 15, preferably from 2 to 6, achieved, for example, by peroxidic degradation in a factor of 3 to 15, preferably 6 to 10 (Abstract; Col. 3, lines 7-19; Col. 4, lines 14-26; Col. 4, line 45-Col. 5, line 32; Col. 6, lines 58-67; Col. 7, lines 1-42 and lines 61-62; Col. 8, lines 9-10.) Peiffer et al teach that the outer or other layers are preferably propylene polymers wherein the propylene polymers of the other layers are partially degraded by addition of organic peroxides to a degradation factor of from 3 to 15, preferably 6 to 10 (Col. 7, lines 16-17; Col. 7, line 64-Col. 8, line 10.) Peiffer et al teach that the base, interlayer(s), and/or outer layer(s) can contain additive in effective amounts in each case, such as

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low-molecular-weight hydrocarbon resins like cyclopentadiene resins in an amount of 1 to 30% by weight, preferably 2 to 30% by weight, and/or lubricants like waxes and polydimethylsiloxanes in an amount of 0.1 to 3% by weight and/or stabilizers and/or neutralizers and/or antistatics like aliphatic tertiary amines and/or antiblocking agents like silicon dioxide; wherein the low-molecular weight hydrocarbon resins have a Mw of 300 to 8,000, preferably 400 to 5,000, particularly 500 to 2,000 (Col. 8, line 35 - Col. 9, lines 55.) The total thickness of the film is preferably from 4 to 200 $\mu$ m, more preferably from 10 to 100 $\mu$ m, with the thickness of the base layer comprising at least 50% of the film (Col. 3, lines 24-26; Col. 8, lines 17-34.) Peiffer et al teach that the biaxial stretching of the film is preferably at a ratio of from 4:1 to 9:1 in the longitudinal direction and from 6:1 to 11:1 in the transverse direction (Col. 10, lines 3-14.)

12. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murschall et al in view of Yeh et al (USPN 5,155,160) or WO 96/27491 (WO'491.) The teachings of Murschall et al are discussed above. Murschall et al does not specifically limit the hydrocarbon resin, lubricant, or wax to those having a molecular weight as instantly claimed, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any low-molecular weight resin within the disclosed range taught by Murschall et al and to further utilize any conventional lubricant or wax, wherein polyethylene wax and paraffin wax, microcrystalline or macrocrystalline, are obvious species of wax utilized in the art as evidenced by Yeh et al or WO'491. Further, given that molecular weight is a result-effective variable affecting the softening point of the additive as taught by Murschall et al, which in turn affects the film properties, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize routine experimentation to determine the optimum molecular weight and



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molecular weight distribution of the resin or wax additive to provide the desired film properties for a particular end use. Additionally, Yeh et al teach that improved barrier properties are obtained by incorporating about 3 to 10 percent by weight of a wax having a molecular weight between 300 and 800 in the polypropylene core layer wherein the molecular weight distribution of the wax is a result-effective variable (Col. 1, line 66 – Col. 2, line 42.) WO'491 also teach that improved barrier properties are provided by incorporation of a wax in the core layer in an amount from 0.25 to 15% by weight, with a molecular weight of from 300 to 1000. Hence, it would have been obvious to one having ordinary skill in the art to utilize a wax as taught by Yeh et al or WO'491 in amount as instantly claimed to provide improved barrier properties to the packaging film taught by Murschall et al. With regards to Claims 2 and 3, though Murschall et al teach a base layer comprising isotactic polypropylene which is peroxidically degraded by a factor of about 3 to 15, Murschall et al does not specifically teach an isotactic index of at least 95% or a Mw/Mn, which is a result of degradation, of 1 to 10 as instantly claimed. However, isotacticity and molecular weight distribution are known result-effective variable affecting the mechanical and melting properties of the polypropylene in the film and hence it would have been obvious to one having ordinary skill in the art at the time limit the invention to utilize routine experimentation to determine the optimum isotacticity index of the polypropylene base and the optimum degradation factor, in turn Mw/Mn, to provide the desired film properties for a particular end use. With regards to Claim 12, though Murschall et al teach that the film may be utilized to produce laminates comprising other plastic films or layers (Col. 5, lines 59-67), Murschall et al do not teach the use of an interlayer between the core and one or both outer heat-sealable layers, however it is well known and conventional in the art to utilize tie or intermediate

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layers between adjacent layers or to utilize additional layers to provide the desired thickness or barrier properties for a particular packaging application.

13. Claims 1-19 are rejected under U.S.C. 103(a) as being unpatentable over Peiffer et al in view of Yeh et al (USPN 5,155,160) or WO 96/27491 (WO'491.) The teachings of Peiffer et al are discussed above. Peiffer et al do not specifically teach a wax, particular a polyethylene wax with a Mw/Mn from 1 to 2 or a macrocrystalline paraffin wax, having a molecular weight as instantly claimed, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any conventional wax material, wherein polyethylene wax and paraffin wax, microcrystalline or macrocrystalline, are obvious species of wax utilized in the art as evidenced by Yeh et al or WO'491. Further, given that molecular weight is a result-effective variable affecting the softening point of the wax additive, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize routine experimentation to determine the optimum molecular weight and molecular weight distribution of the resin or wax additive to provide the desired film properties for a particular end use. Additionally, Yeh et al teach that improved barrier properties are obtained by incorporating about 3 to 10 percent by weight of a wax having a molecular weight between 300 and 800 in the polypropylene core layer wherein the molecular weight distribution of the wax is a result-effective variable (Col. 1, line 66 – Col. 2, line 42.) WO'491 also teach that improved barrier properties are provided by incorporation of a wax in the core layer in an amount from 0.25 to 15% by weight, with a molecular weight of from 300 to 1000. Hence, it would have been obvious to one having ordinary skill in the art to utilize a wax as taught by Yeh et al or WO'491 in amount as instantly claimed to provide improved barrier properties to the packaging film taught by Peiffer et al.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428.


The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



mrj  
February 25, 2002



Paul Thibodeau  
Supervisory Patent Examiner  
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